

CLAIMS

1. A method for treating a fetus comprising administering mesenchymal stem cells to the fetus.
- 5 2. The method of Claim 1 wherein the mesenchymal stem cells differentiate in vivo.
3. The method of Claim 1 wherein the mesenchymal stem cells are modified
- 10 with exogenous genetic material.
4. The method of Claim 1 wherein said fetus is non-human.
5. The method of Claim 4 wherein said mesenchymal stem cells are human.
- 15 6. A method of engrafting mesenchymal stem cells, comprising: administering mesenchymal stem cells to a fetus in utero.
7. The method of Claim 6 wherein said fetus is non-human.
- 20 8. The method of Claim 7 wherein said mesenchymal stem cells are human.
9. A method of preparing an organ for transplantation, comprising:
 - 25 (a) administering mesenchymal stem cells to a non-human fetus in utero; and
 - (b) harvesting said organ.
- 30 10. The method of Claim 9 wherein said non-human fetus is ovine.
11. The method of Claim 9 wherein said mesenchymal stem cells are human.
12. The method of Claim 9 wherein said organ is harvested after the birth of said
- 35 fetus.
13. A method of xenotransplantation comprising: transplanting the organ of Claim 12 into a human patient.
- 40 14. The method of Claim 13 wherein said organ is a heart.
15. The method of Claim 13 wherein said organ is a pancreas.
16. The method of Claim 13 wherein said organ is a kidney.
- 45